

FIG. 1A

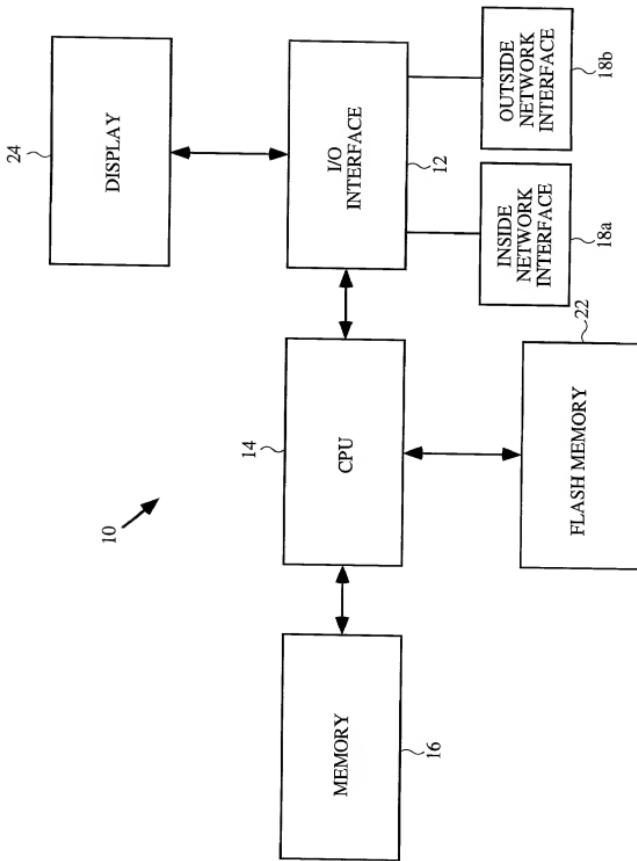


FIG. 1B

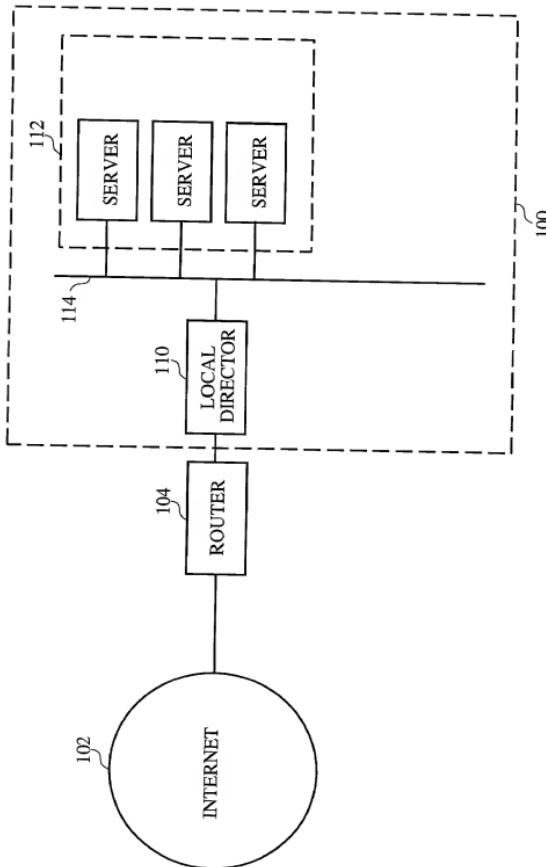


FIG. 1C

101150 \* 22515650

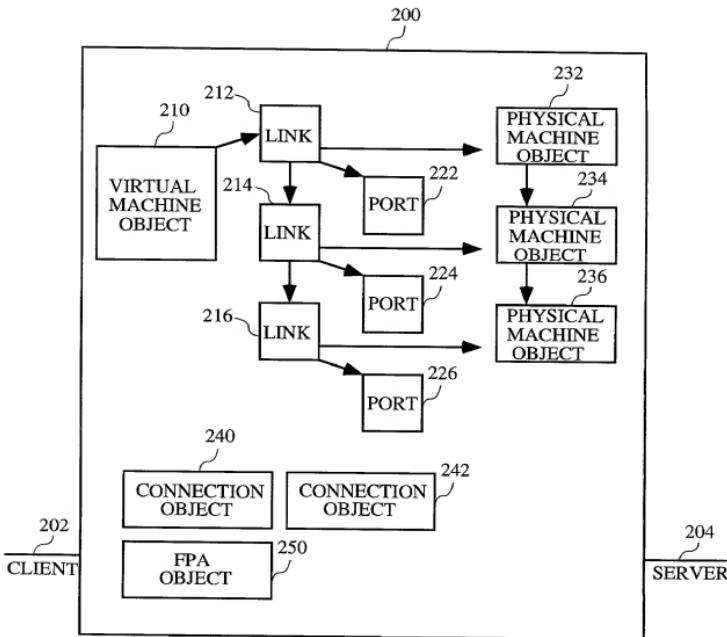


FIG. 2

**VIRTUAL MACHINE OBJECT**

VIRTUAL MACHINE IP ADDRESS	~304
POINTER TO LINK OBJECT	~306
POINTER TO LAST USED LINK OBJECT	~308
POINTER TO NEXT VIRTUAL MACHINE	~310
STATE ( IN SERVICE, OUT OF SERVICE, FAILED)	~312
PHYSICAL MACHINE ASSOCIATION INTERVAL	~314

BACKUP POINTER	~316
DESIRED SESSION DISTRIBUTION SCHEME	~318
ACTUAL SESSION DISTRIBUTION SCHEME	~320

**FIG. 3A**

**PHYSICAL MACHINE OBJECT**

- 350~ **POINTER TO NEXT PHYSICAL MACHINE OBJECT**
- 352~ **REAL IP ADDRESS OF THE PHYSICAL MACHINE**
- 354~ **LAST RESPONSE TIME OF THE PHYSICAL**
- 356~ **THE NUMBER OF VIRTUAL MACHINES  
LINKED TO THE PHYSICAL MACHINE**
- 358~ **RESPONSE TIME BIASED BY AGE ( PREDICTED RESPONSE TIME)**
- 360~ **AGE STAMP**
- 362~ **MAC ADDRESS OF THE PHYSICAL MACHINE**
- 364~ **NUMBER OF UNANSWERED SYN CONNECTIONS**
- 366~ **STATE OF THE PHYSICAL MACHINE ( IN SERVICE, OUT OF  
SERVICE, OR FAIL)**
- 368~ **NUMBER OF DITCHED CONNECTIONS**
- 370~ **CONNECTION FAILURE THRESHOLD**
- 371~ **NUMBER OF CONNECTIONS TO PHYSICAL MACHINE**
- 372~ **LOCAL PORT NUMBER**
- 373~ **MAXIMUM NUMBER OF ALLOWED CONNECTIONS**
- 374~ **CONNECTION TIMEOUT**
- 375~ **POINTER TO BACKUP MACHINE**
  
- 376~ **WEIGHT**
- 377~ **PORT VARIABLE**

**FIG. 3B**

## CONNECTION OBJECT

326 ~ **POINTER TO NEXT CONNECTION OBJECT ON HASH CHAIN**

327 ~ **FOREIGN IP ADDRESS**

328 ~ **FOREIGN PORT NUMBER**

329 ~ **VIRTUAL MACHINE IP ADDRESS**

330 ~ **VIRTUAL MACHINE PORT NUMBER**

331 ~ **PHYSICAL MACHINE POINTER**

332 ~ **PHYSICAL MACHINE MAPPED PORT NUMBER**

333 ~ **MULTIPURPOSE TIMER**

334 ~ **PHYSICAL MACHINE PORT NUMBER**

FIG. 3C

372

FPA OBJECT

- 386 ~ **POINTER TO A PHYSICAL MACHINE OBJECT**
- 387 ~ **FOREIGN IP ADDRESS**
- 388 ~ **TIME OF LAST CONNECTION**
- 389 ~ **POINTERS TO OTHER FPA OBJECTS**

FIG. 3D

373

LINK OBJECT

- 391 ~ **POINTER TO NEXT LINK OBJECT**
- 392 ~ **POINTER TO A PHYSICAL MACHINE OBJECT**
- 393 ~ **POINTER TO A PORT OBJECT**

FIG. 3E

374

PORT OBJECT

- 395 ~ **POINTER TO NEXT PORT OBJECT**
- 396 ~ **PORT NUMBER AS VIEWED BY THE CLIENT**
- 397 ~ **PORT NUMBER AS MAPPED TO A PHYSICAL MACHINE PORT**

FIG. 3F

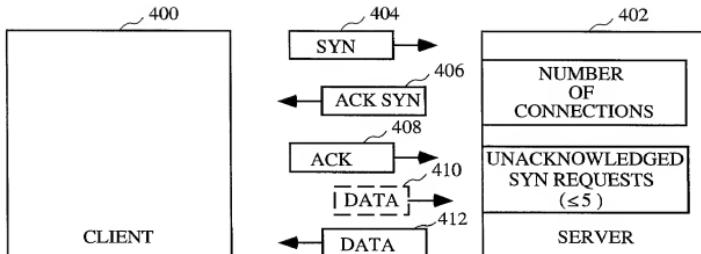
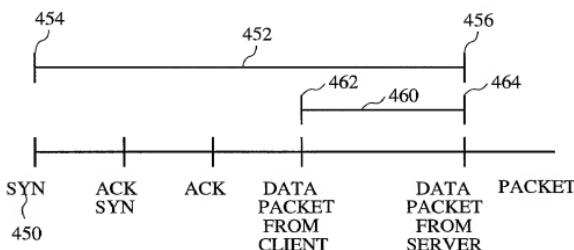


FIG. 4A



$$470 \sim R = \frac{I}{NC}$$

$$472 \sim PR = NC \cdot R - f(t)$$

$$474 \sim f(t) = \frac{t_{CURRENT} - t_{AGE\ STAMP}}{4}$$

FIG. 4B

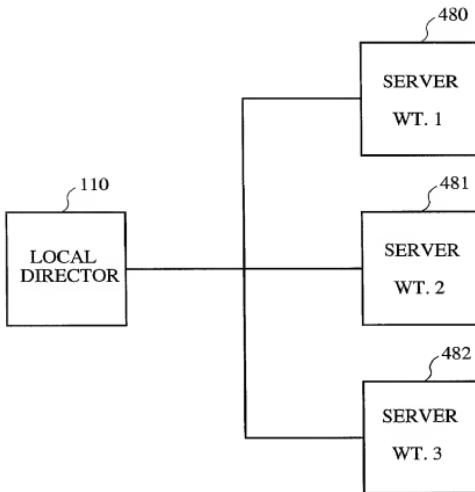


FIG. 4C

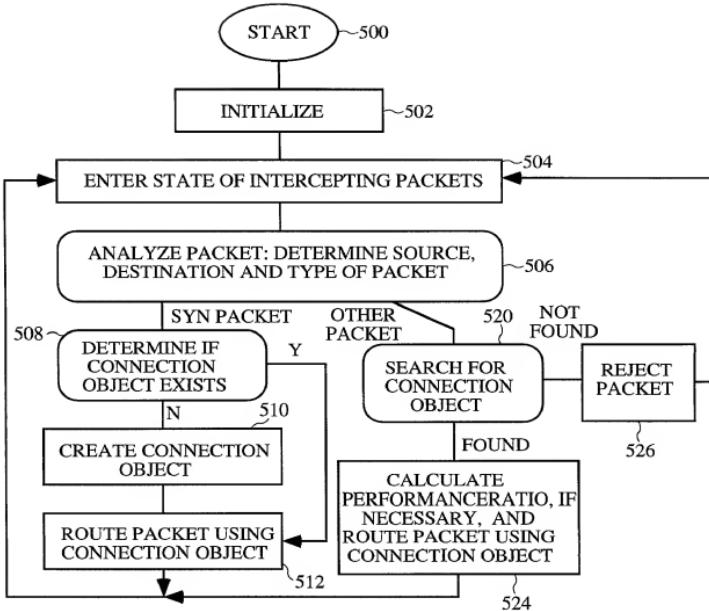


FIG. 5

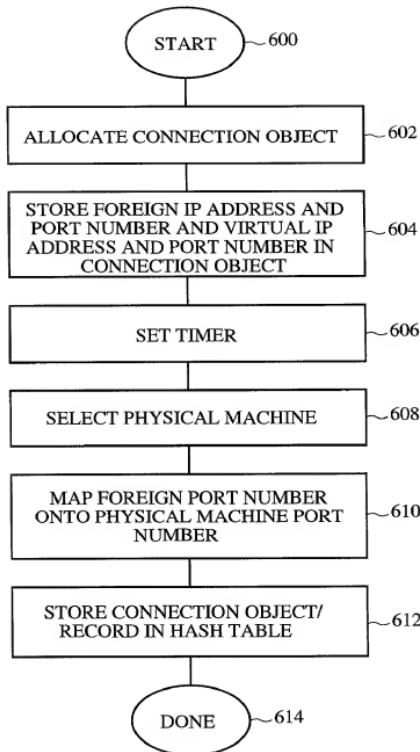


FIG. 6

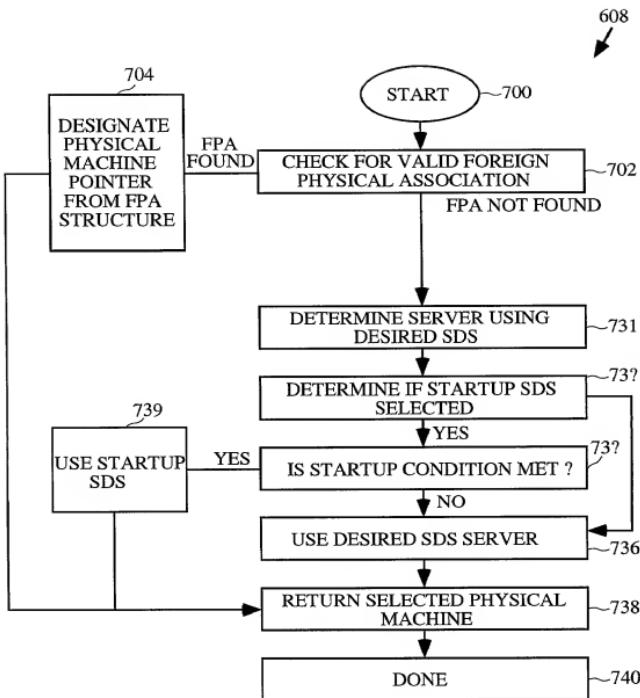


FIG. 7A

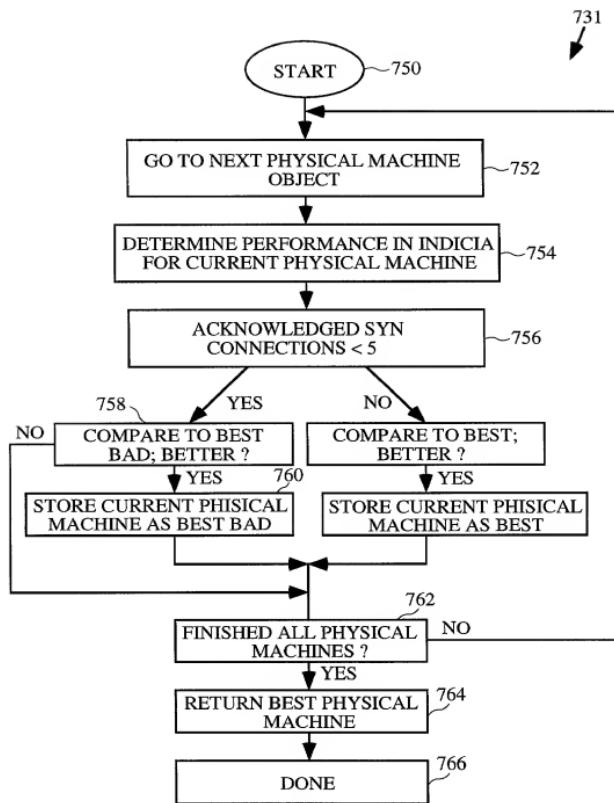


FIG. 7B

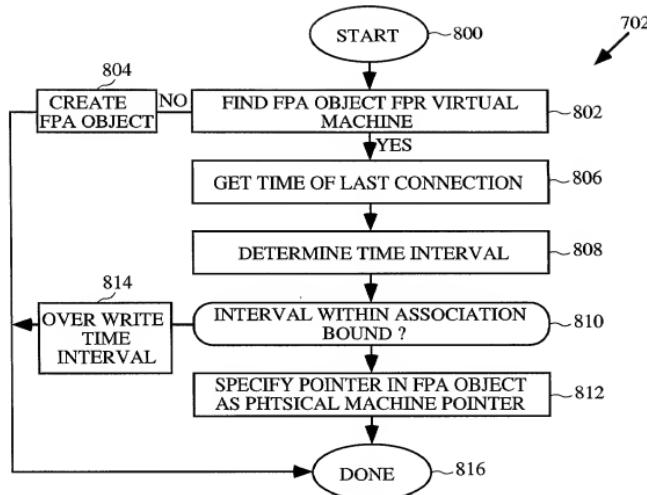


FIG. 8

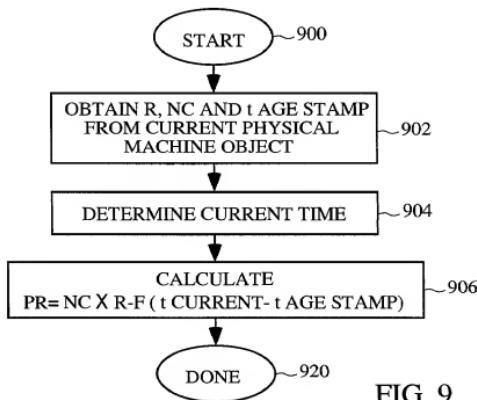


FIG. 9

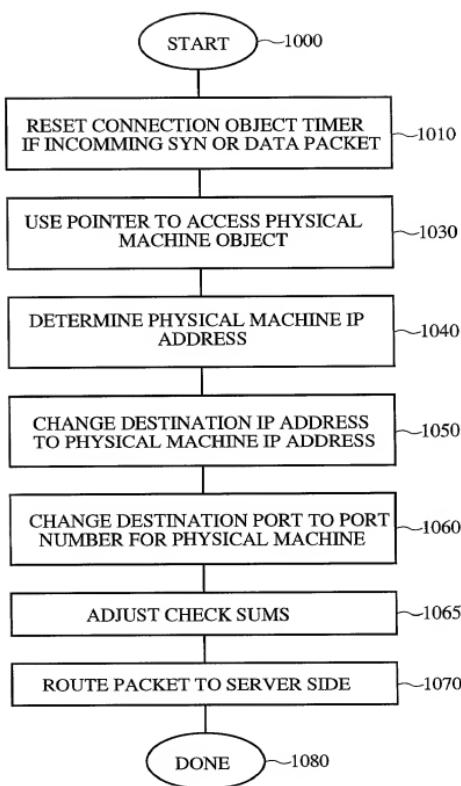


FIG. 10

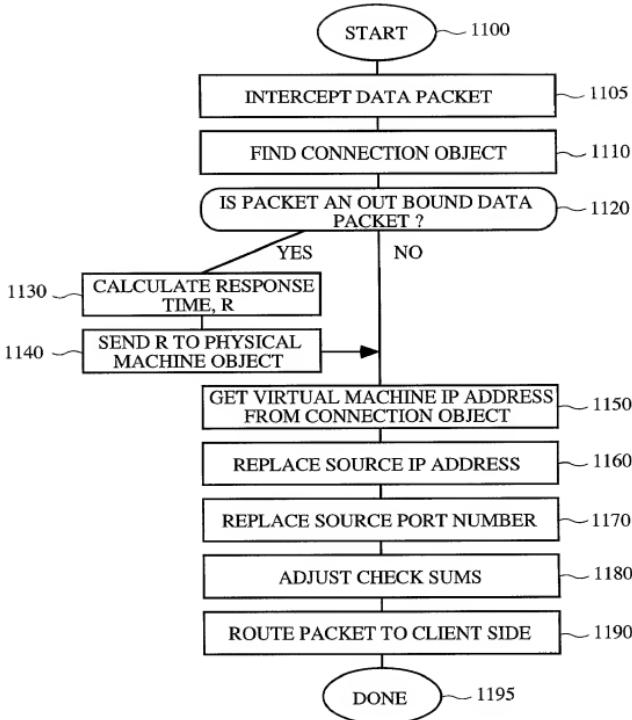


FIG. 11